

Appendix F:
HAZARDS AND HAZARDOUS
MATERIALS

EARVIN "MAGIC" JOHNSON RECREATION AREA MASTER PLAN
Draft ENVIRONMENTAL IMPACT REPORT

**HAZARDOUS MATERIALS ANALYSIS
EARVIN "MAGIC" JOHNSON RECREATION AREA,
905 EAST EL SEGUNDO BOULEVARD,
WILLOWBROOK AREA,
LOS ANGELES COUNTY, CALIFORNIA**



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1.0 INTRODUCTION

This Hazardous Materials Analysis (“HMA”) presents the findings of the technical review undertaken by this firm to assess the potential contamination issues associated with the future development of the Earvin “Magic” Johnson Recreation Area (EMJRA) with respect to construction and operation of the proposed EMJRA Master Plan. The EMJRA project will require grading and related excavation work on portions of currently EMJRA Park, the former Ujima Village Apartments (UVA), and Ujima Housing Corporation (UHC) properties. Future grading and excavation of the EMJRA project may result in contact with the underlying soil, and the potential exists for impacts from contaminated soil and soil gas.

1.1 Purpose and Scope

The purpose of this HMA is to identify and provide recommendations on potential subsurface, soil and soil gas, concerns at the EMJRA, UVA, and UHC properties. The potential for impacts related to hazardous materials at EMJRA, UVA, and UHC properties will generally occur when elevated (i.e., above regulatory guidance values) levels of contaminated soils are disturbed, based on an action that would create pathways for exposure, either to humans or to the environment, or an action that would introduce new activities or processes and the risk of human or environmental exposure would be increased.

This document is to provide project managers, construction managers, and contractors with information and guidance on potential environmental concerns that may be encountered during surficial disturbances and site grading, including excavation and re-compaction of site soils. All activities which involve disturbing or excavating site soils will be performed in accordance with the attached Soil Management Plan (SMP) (Kleinfelder 5/6/11), and all permitting and operational requirements of the Los Angeles Regional Water Quality Control Board (RWQCB-LA), Department of Toxic Substance Control (DTSC), Air Quality Management Department (AQMD), and Occupational Safety and Health Administration (OSHA) the governing regulatory agencies for the project. The SMP will

require updating to more closely reflect the planned construction activities.

The scope of this HMA included a review of: the current and historical land uses; potential environmental impacts or health concerns arising as a result of the past site use; the development of and future use of EMJRA, UVA, and UHC properties with respect to exposure to contaminated materials; and to evaluate the likely potential for any soil contamination to be encountered during site grading.

2.0 SITE HISTORY

General Petroleum Company of California began operations at Athens Tank Farm in 1924. In 1926, Socony Oil purchased the property. Improvements at the site included twenty-two 80,000 barrel steel aboveground storage tanks (ASTs); two concrete-lined crude oil reservoirs with a combined capacity of 1.8 million barrels; a pipeline pumping station (leased to Shell Oil in 1953); and an absorption plant. In 1962, Mobil Oil Corporation, the successor to Socony Oil, ceased operations at Athens Tank Farm, and began phasing out operations in preparation for divesting the property. The tank farm ASTs, crude oil reservoirs, and pipeline pumping station were removed in 1963. The absorption plant was removed in 1964, and the Athens Tank Farm property was vacant by 1965. The Athens Tank Farm property (122 acres) was subsequently purchased from Mobil by De Lay Land Company in July 1965. The site remained vacant until the Ujima Village Apartments (UVA) and adjacent Ujima Housing Corporation (UHC) properties were developed in the early 1970s.

3.0 SITE DESCRIPTION

The former Athens Tank Farm property currently contains the EMJRA, UVA, and UHC properties, and is located in the unincorporated Willowbrook area of Los Angeles County, California. EMJRA is a public park that borders the UVA and UHC properties to the north south, and west. EMJRA contains two artificial lakes that are each approximately five acres with an approximate half-mile

shoreline. Each lake contains a small island area. The grassy areas of the park are undeveloped and are accessible to the public for recreational use.

The UVA and UHC properties comprise a total of approximately 16 acres and are located in the east-central portion of the former Athens Tank Farm. The UVA complex is a former apartment complex with 24 apartment buildings and is currently undergoing demolition. At the time of this report the apartments had been demolished and only the foundations and utilities were still present. The UHC property contains four modular buildings, currently all vacant and in disrepair. An environmental compound, with what appears to be SVE extraction equipment, has been constructed in the east portion of the County/Parks property.

The area around the former Athens Tank Farm is largely single family residential with commercial development generally along the major roads that border these properties.

4.0 REVIEW OF RELEVANT REPORTS

Environmental site assessments and investigations at UVA and UHC properties were conducted beginning in the 1990s and currently ongoing. Many environmental reports have been prepared for the EMJRA, UVA, and UHC properties, and are available for public viewing on the State Water Quality Control Board's online Geotracker website. The following reports by Kleinfelder were reviewed in the preparation of this HMA: Preliminary Shallow Soil Investigation Report (2008); Revised Human Health Screening Evaluation (2009); Site Assessment Report (2010); Human Health Risk Assessment (2010, 2011) Remedial Action Plan, and Phase I, Former Athens Tank Farm (2012).

4.1 Preliminary Shallow Soil Investigation Report

The Preliminary Shallow Soil Investigation Report (less than 10 feet) documented the placement of 18 soil sample locations within the proposed soccer fields, located south of 126th Street, 8 soil sample locations within the proposed basketball courts, located west of the

south parking lot and south of the playground, and 2 soil samples from each of the islands in the artificial lakes. Three soil samples were attempted from each location at 0-6-inches, 4 feet, and 10 feet below ground surface (bgs). A total of 78 soil samples were obtained for analysis during this investigation. Soil samples were analyzed for volatile organic compounds (VOCs) and oxygenates, semi-volatile organic compounds (SVOCs), California Assessment Manual (CAM 17) metals, polychlorinated biphenyls (PCBs), total petroleum hydrocarbons as gasoline (TPH-g), diesel (TPH-d) and motor oil (TPH-mo), chlorinated herbicides, organochlorine pesticides, organophosphorous pesticides, and organic lead.

The results of the soil sample analysis indicated that VOCs, exceeding the United States Environmental Protection Agency, Region IX (USEPA) 2008 Regional Screening Levels (RSLs) and/or the California Department of Toxic Substances Control, 2005 California Human Health Screening Levels (CHHSLs) for residential soil are present in the proposed northern soccer field. Total petroleum hydrocarbons were detected in soil samples from the proposed basketball courts, soccer fields and both island areas. Arsenic exceeded the RSLs and CHHSLs in all samples. Lead exceeded the RSLs, and CHHSLs in only one sample, at the proposed basketball courts. Six SVOC compounds were detected above their respective RSLs in the proposed basketball and soccer fields, but primarily in the northern portion of the proposed soccer field. PCBs, as Arochlor 1254, was detected in samples from the proposed basketball and soccer fields, with two samples exceeding the CHHSLs. Organochlorine pesticides detected at the site did not exceed their respective CHHSLs. No organophosphorous pesticides or chlorinated herbicides were detected above their laboratory reporting limits.

The report concluded the highest and most frequent area of shallow soil contamination, of the three areas sampled, was the northern portion of the proposed soccer fields.

4.2 Revised Human Health Screening Evaluation

The revised Human Health Screening Evaluation was conducted for

the UVA and UHC properties. The report documents 28 shallow (0-10 feet deep) soil sample locations in the unpaved landscape areas of the properties. Soil samples were obtained at 6 inches, 4 feet, and 10 feet bgs, and analyzed for VOCs, SVOCs, Title 22 metals, PCBs, TPH-g, TPH-d, TPH-mo, chlorinated herbicides, organochlorine pesticides, organophosphorous pesticides, organic lead, and at a few select UHC locations, dioxins and furans. Additionally 23 nested soil vapor probes were placed at the UVA property and two at the UHC property. The soil vapor probes were placed at 5, 15 and 32 feet bgs at each location. Sixteen outdoor air samples and thirty indoor air samples were obtained as part of this investigation.

The report concluded that in the shallow soils, concentrations of carcinogenic SVOCs were consistent with regional background levels, PCBs and pesticides were not detected at concentrations or frequencies that indicate a health hazard, and arsenic concentrations were typical of regional background levels and do not indicate a health risk. Further, the residual hydrocarbons in the shallow soils at the UVA and UHC properties are not likely to pose a health hazard that will require further investigation or mitigation. However, evaluation of potential health risks should be completed upon the final design of the EMJRA improvements.

The soil vapor sampling found several compounds of concern (COCs) in the soil vapor, however, these did not appear to significantly contribute to the COC concentrations found in the indoor air sampling. Indoor air sampling was consistent with the outdoor air sample concentrations for the COCs, and consistent with regional background levels. Also several VOCs detected in the soil vapor were not detected in the indoor air sampling. The report concluded that subsurface sources of VOCs, that may be related to the former Athens Tank Farm do not appear to affect the indoor air quality at the UVA or UHC properties. Methane concentrations detected in indoor air samples were below 500 parts per million per volume (ppmv).

4.3 Site Assessment Report

The Site Assessment Report documented the collection of shallow

soil samples in the high use playground and unpaved picnic areas, and the area of EMJRA north and west of the former absorption plant. Fifty soil borings were placed in these areas with samples obtained at 0-1.5 feet, 4 feet, and 10 feet bgs. Shallow soil samples were collected to assess the extent of petroleum hydrocarbons in the subsurface and to evaluate the potential risk posed by direct contact with shallow soil. The shallow soil samples were analyzed for VOCs, SVOCs, Title 22 metals, TPH, organic lead, chlorinated herbicides, organochlorine pesticides, organophosphorous pesticides, and dioxins and furans.

The report results included previously reported data from the EMJRA, UVA and UHC properties, and indicated that organophosphorous pesticides were not detected and chlorinated herbicides, organochlorine pesticides, and PCBs were detected at relatively low concentrations and frequencies. The PCB concentrations were in the range found in urban soil. The metals analysis showed little variability which indicated the concentrations represented background levels. VOCs, TPH, and SVOCs in near-surface shallow soil samples (0 to 1.5 feet bgs) occur at relatively low concentrations and frequencies. The concentration and frequency of these compounds increased in the 4- and 10-foot soil samples.

Results of the soil vapor surveys indicated that the highest concentrations of benzene, ethylbenzene, and methane are present in the UVA and UHC areas, with VOC and methane concentrations increasing from 5 to 15 to 32 feet deep, and over a large area.

4.4 Human Health Risk Assessment

The Human Health Risk Assessment (HHRA) was in general, conducted to expand on the Human Health Screening Evaluations (2009) and to evaluate potential health hazards to EMJRA workers and visitors based on site investigation data.

The HHRA addressed direct contact with soil compounds of concern (COCs) through ingestion, dermal contact, and inhalation of dust and indirect contact through inhalation of vapors that could migrate from

subsurface sources to ambient air to park construction workers, maintenance personnel, and visitors to the park.

The report provided risk characterizations for the following scenarios:

- For the maintenance worker scenario, for surficial soil from 0-4 feet bgs the incremental lifetime cancer risk (ILCR) was 5×10^{-7} and the non-cancer hazard index was 0.05. For shallow soil from 0-10 feet bgs the ILCR was 7×10^{-7} and the non-cancer hazard index was 0.07.
- For the park construction worker scenario, for shallow soil from 0 to 10 feet bgs the ILCR was 2×10^{-7} and the non-cancer hazard index was 0.4.
- For the site-wide park visitor scenario, for shallow soil from 0-4 feet bgs, the ILCR was 6×10^{-7} and the non-cancer hazard index was 0.3; for shallow soil from 0 to 10 feet bgs the ILCR was 7×10^{-7} and the non-cancer hazard index was 0.4.
- For the sports field park visitor scenario, for surficial soil from 0 to 4 feet bgs the ILCR was 2×10^{-6} and the non-cancer hazard index was 0.2; for shallow soil from 0 to 10 feet bgs the ILCR was 1×10^{-6} and the non-cancer hazard index was 0.6.
- For the basketball courts park visitor scenario, for surficial soil from 0 to 4 feet bgs the ILCR was 2×10^{-9} and the non-cancer hazard index was <0.001 ; for shallow soil from 0 to 10 feet bgs the ILCR was 1×10^{-9} and the non-cancer hazard index was <0.001 .
- For the UVA and UHC property the concentrations of COCs present in the environment are consistent with ambient background conditions or are not at concentrations indicative of an incremental increase in risk to this population.

The HHRA report concluded that the ILCR and non-cancer hazard index for the different scenarios do not exceed levels that would

trigger further investigation or remediation, and there was no further action necessary to control or mitigate risk to human health under California Environmental Protection Agency (EPA) policy. However, additional evaluation of potential health risks should be completed upon the final design of the EMJRA improvements using appropriate exposure scenarios.

Proposed EMJ Park improvements would not be initiated until both the LARWQCB and the DTSC have deemed each particular use area to have been remediated below the thresholds appropriate for public use of the Project site.

4.5 Remedial Action Plan

The Remedial Action Plan (RAP) report focused on soil and soil vapor conditions with the specific objective of mitigating methane and petroleum hydrocarbon volatile organic compounds (VOCs), including benzene, present in shallow soil vapor beneath the Site. In addition, the RAP provided for implementation of a remedial technology to mitigate offsite migration of soil vapor and to begin to address soil vapor in adjacent offsite areas for potential future offsite remedies that might be required, based upon the results of this phase of the RAP. The objectives of the RAP, based on the current onsite soil and soil vapor environmental conditions and present residential and public park uses, were to prevent or minimize potential exposure to concentrations of COCs exceeding remedial goals in surficial and shallow soil, and ambient air.

Constituents of potential concern (COPCs) identified in onsite soil and soil vapor investigations that may be related to the historical operations of the Athens Tank farm are petroleum hydrocarbons, including naphthalene, benzene, toluene, ethylbenzene and xylenes (BTEX), and other petroleum VOCs. In addition, methane in soil gas, which may be generated by the anaerobic biodegradation of petroleum hydrocarbons, was also considered a constituent of potential concern. The RAP indicated that based on the results of HHRA for the Ujima Village Apartments (UVA), Ujima Housing Corporation (UHC), and EMJRA properties, these constituents of potential concern do not affect indoor air quality or pose a health

hazard and/or they are consistent with the range of background concentrations reported in Southern California, and do not exceed levels that trigger further investigation or remediation. Site-wide metals were also evaluated during the HHRA as chemicals of potential concern. The metals concentrations in surficial and shallow soil samples did not, in the aggregate, pose an incremental cancer risk and are interpreted to be consistent with the range of background concentrations reported in Southern California. Methane was not considered a health risk; however, it is considered a constituent of concern (COC) due to potential safety hazards associated with asphyxia, flammability, and ignitability.

The RAP encompassed excavation at nine locations where the RWQCB-LA asked for further assessment and delineation of lead and arsenic affected shallow soil, and SVE for mitigation of methane and petroleum hydrocarbon VOCs in shallow soils. Impacted soil was removed from 11 locations and backfilled with a sand slurry and sod, as reported in a Soil Excavation Report (Kleinfelder, 2013). The SVE was implemented between 20 and 30 feet bgs to pull methane and VOCs in the shallow soil downward to the extraction points and to remove methane and VOCs from deeper soils, which may contribute to methane and VOCs in the shallow soil. The proposed SVE system was implemented in a phased approach with the first phase along Clovis Avenue and the southeast boundary of the EMJRA to mitigate potential lateral offsite methane migration to the east and south.

5.0 CONCLUSIONS

Based on our review of the referenced project documents, it is apparent that the past use of the site as the Athens Tank Farm has impacted the soil and groundwater under the site. As a result of the impacted soil, soil gas is also a potential issue at the site. Based on the HHRA conducted for various park users and construction and maintenance workers at the site, there is no incremental lifetime cancer risk from exposure to the existing soil and/or soil gas at the site. The non-cancer hazard index was below 1 for all park uses. Further, assessment and cleanup is currently underway under the oversight of the RWQCB-LA. This cleanup activity will further reduce the levels of contaminants in the site soil gas, and further protect

the users/visitors to the current and future EMJRA park facilities. However, additional evaluation of potential health risks should be completed upon the final design of the EMJRA improvements, using appropriate exposure scenarios and the proposed EMJ Park improvements would not be initiated until both the RWQCB-LA and the DTSC have deemed each particular use area to have been remediated below the thresholds appropriate for public use of the Project site.

6.0 RECOMMENDATIONS

The nature and extent of future improvements at the EMJRA and former UVA and UHC properties are not established at this time. For park improvements that will be open air or well ventilated and with no continual occupancy, such as aquatic center, outdoor amphitheater, soccer fields, tennis/basketball courts, stables, and restrooms, the available information indicates there should be no adverse environmental impact to workers during construction, maintenance personnel, or park visitors/users of these type of facilities. These types of improvements will most likely require a simple vapor barrier for soil vapor mitigation and use of HAZWOPER trained construction workers in contaminated areas.

Other anticipated park improvements that may be enclosed and/or have continual use, such as gymnasium, community center, and South Agency Facility will need an appropriately designed soil vapor mitigation method.

During construction of the park improvements contaminated soil, most likely hydrocarbon impacted, may be encountered in isolated areas. Depending on the size of the project the contractor may be required to have on-site an environmental professional familiar with environmental screening and sampling.

We would recommend that if non-occupancy type buildings, such as restrooms, are constructed, a vapor barrier for vapor mitigation can be implemented during construction to minimize any potential methane or other volatile compound significantly migrating into the structure. For occupied buildings, such as office and maintenance

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spaces, an appropriate soil vapor mitigation method, will need to be designed. All soil vapor mitigation methods should be designed by a Registered Professional Engineer (PE), with regulatory approval from the RWQCB-LA and/or DTSC.

7.0 CLOSURE

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

Respectfully submitted,
LOR Geotechnical Group, Inc.

A handwritten signature in black ink, appearing to read 'MKO', with a horizontal line extending to the right.

M. Kevin Osmun, CE 55116
Vice President

MKO:MLH:smf

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